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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/526,194	03/01/2005	Zhenhua Wang	CH02 0032 US	6441
65913	7590	10/17/2007		
NXP, B.V. NXP INTELLECTUAL PROPERTY DEPARTMENT M/S41-SJ 1109 MCKAY DRIVE SAN JOSE, CA 95131			EXAMINER LE, DINH THANH	
			ART UNIT 2816	PAPER NUMBER
			NOTIFICATION DATE 10/17/2007	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ip.department.us@nxp.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/526,194	<b>Applicant(s)</b> WANG, ZHENHUA	
	<b>Examiner</b> DINH T. LE	<b>Art Unit</b> 2816	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 27 July 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-7, 9, 10 and 12-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 16 and 17 is/are allowed.
- 6) ☒ Claim(s) 1-7, 9-10 and 12-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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## FINAL REJECTION

### *Claim Rejections*

#### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3-7, 9 and 14-15 are rejected under 35 USC 103 (a) as being unpatentable over Tamba (US 5,594,383) in view of Kimura et al (US 6,326,838).

Tamba discloses in figures 29-10 an integrated filter circuit comprising:

- a master control unit and a slave unit (10) with at least one slave filter, and
- a master control unit comprising an integrator (21, 22) having circuit elements which matches those elements of the slave filter that define the slave filter's time constant; a filter (35), a voltage comparator (31) being connected to a reference voltage (ground) for providing an output frequency signal, and a phase comparator (33,34, Figures 11a-11d) receiving said output frequency and a reference frequency signal from element (32) to provide a control signal (VC) to the said at least one slave filter (10).

With regard to claim 9, the DC voltage is read on the voltage (Vio) as shown on Figure 10.

However, Tamba does not disclose that the reference voltage is variable.

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Nevertheless, Kimura et al suggests in Figure 1 a circuit comprising a comparator (24) for comparing the output of a reference filter (21) with a variable threshold (V1-V4) for providing control signals to control amplifiers of the slave filter (10) with high precision and for reducing size and power consumption, see lines 1-35, column 2.

It would have been obvious to a person having skill in the art at the time the invention was made to incorporate the variable threshold voltage as suggested by Kimura et al into the circuit of Tamba for the purpose of tuning the plurality of transconductance amplifiers of the slave filter with high-precision and for reducing size and power consumption.

Claims 2, 10 and 12-13 are rejected under 35 USC 103 (a) as being unpatentable over Tamba (US 5,594,383) in view of Kimura et al (US 6,326,838) and further in view of Petersen et al (US 5,325,317).

Tamba in view of Kimura et al discloses as filter circuit with all of the limitations of the claimed invention as stated above but does not disclose that the tuning control signal is the discrete signal as recited in claim 2 and the threshold voltage (ground) or the DC voltage (Vio) is varied to tune the filter.

Petersen et al suggests in figure 6 a tuning circuit comprising a counter (72) and a decoder (74) for providing discrete tuning signal to accurately tune the filter.

It would have been obvious to a person having skill in the art at the time the invention was made to employ the counter and the decoder as suggested by Petersen et al in the circuit of Tamba for the purpose of accurately tuning the filter.

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A skill realizes that the threshold voltage (ground) at the input of the comparator (31, 32) and the Vio of Tamba can be selected or varied to adjust the output frequency of the filter. Thus, varying the threshold voltage or the voltage Vio for accommodating with a particular environment is considered to be a matter of a design expedient for an engineer and have been obvious at the time of the invention.

***Response to Applicant's Arguments***

The applicant argues that the voltage comparator of Tamba is not connected to a variable threshold voltage. The arguments are not persuasive because this limitation is suggested in the Kimura et al reference.

***Allowable Subject Matter***

Claims 16-17 are allowed because the prior art of record does not suggest "the logic circuit" in claim 8 and "varying an input clock frequency" in claim 11.

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

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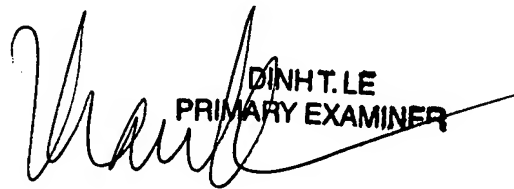
will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DINH T. LE whose telephone number is (571) 272-1745. The examiner can normally be reached on Monday-Friday (8AM-7PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, ROBERT J. PASCAL, can be reached at (571) 272-1740.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

10/3/07

  
DINH T. LE  
PRIMARY EXAMINER